This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended)   A method for manipulating a plurality of discrete units of information, ~~Items, in a hardware/software interface system of a computer system,~~ said method comprising:

generating, by an operating system, a shell and a kernel, wherein the operating system includes a database management program;

generating, by the operating system, a plurality of Items wherein each Item includes Relationships to other Items;

storing, by the operating system, the Items in a file system as filestreams, wherein the filestreams are managed within the context of the database management program;

associating, by the operating system, each of said Items with one or more Relationships, the one or more Relationships including Holding Relationships that control the lifetime of a target Item and Embedding Relationships that enable modeling of compound Items, each one or more Relationships being between a source Item and a target Item, the target Items each having an associated reference count;

determining, by the operating system, the lifetime of each target Item that has a Holding Relationship associated between the source Item and the target Item based on the associated reference count ~~if a Holding Relationship is associated between the source Item and the target Item~~;

storing, by the operating system, each target Item based on the lifetime determined from the reference count; [[and]]

preventing, by the operating system, a Holding Relationship between the source Item and the target Item if an Embedding Relationship currently exists between the source Item and the target Item; and

exposing the Items to the shell of the operating system.

2. (Currently amended)   The method of claim 1 wherein each Relationship from among said plurality of Relationships constitutes, at the operating system ~~hardware/software interface system~~ level, a mapping between a pair of Items that said Relationship interconnects.

3. (Previously Presented)   The method of claim 2 wherein each Relationship has properties.

4. (Previously Presented)   The method of claim 3 wherein each Relationship comprises a target property for the identification of the target Item of said Relationship.

5. (Previously Presented)   The method of claim 4 wherein each Relationship further comprises an ownership property corresponding to an ownership of said target Item.

6. (Currently amended)   The method of claim 3 wherein the operating system hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common value for a common property.

7. (Currently amended)   The method of claim 3 wherein the operating system hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common property.

8. (Currently amended)   The method of claim 3 wherein each Item has an Item type, and the operating system hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has the same Item type.

9. (Currently amended)   The method of claim 3 wherein each Item has a parent Item type, and the hardware/software interface system operating system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common parent Item type.

10. (Currently amended)   The method of claim 3 wherein the operating system hardware/software interface system automatically establishes a Relationship between each pair of Items based on a user-defined parameter.

11. (Currently amended)   A computer-readable storage medium for implementing an operating system ~~hardware/software interface system~~, the computer-readable medium comprising:

instructions for the operating system including instructions for a database management program;

instructions for the operating system including instructions for a file system;

instructions for the operating system including instructions for generating items;

instructions for the operating system including instructions for storing the Items in the file system as filestreams, wherein the filestreams are managed within the context of the database management program;

instructions for the database management program including instructions for ~~having stored thereon computer-readable instructions performing a step comprising:~~ manipulating the Items ~~a plurality of discrete units of information, Items,~~ said Items associated by one or more Relationships ~~managed by said hardware/software interface system~~, the one or more Relationships including Holding Relationships that control the lifetime of a target Item and Embedding Relationships that enable modeling of compound Items, wherein a target Item of an Embedding Relationship can be manipulated within the context of the source Item, each Relationship being associated between a source Item and the target Item~~, the target Item having an associated reference count that is used to determine the lifetime of the target Item if a Holding Relationship is established between the source Item and the Target Item, and storage of the target Item is maintained based on the lifetime determined by the reference count~~.

12. (Currently amended)   The computer-readable storage medium of claim 11 wherein each Relationship from among said plurality of Relationships constitutes, at the operating system ~~hardware/software interface system~~ level, a mapping between a pair of Items that said Relationship interconnects.

13. (Previously presented)   The computer-readable storage medium of claim 12 wherein each Relationship has properties.

14. (Previously presented)   The computer-readable storage medium of claim 13 wherein each Relationship comprises a target property for the identification of the target Item of said Relationship.

15. (Previously presented)   The computer-readable storage medium of claim 14 wherein each Relationship further comprises an ownership property corresponding to an ownership of said target Item.

16. (Currently amended)   The computer-readable storage medium of claim 13 wherein the <u>operating system</u> ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common value for a common property.

17. (Currently amended)   The computer-readable storage medium of claim 13 wherein the <u>operating system</u> ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common property.

18. (Currently amended)   The computer-readable storage medium of claim 13 wherein each Item has an Item type, and <u>operating system</u> ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has the same Item type.

19. (Currently amended)   The computer-readable storage medium of claim 13 wherein each Item has a parent Item type, and <u>operating system</u> ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common parent Item type.

20. (Currently amended)   The computer-readable storage medium of claim 13 wherein the <u>operating system</u> ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items based on a user-defined parameter.

21. (Currently amended)   A computer system, comprising:

    a processor;

    a memory; and

    <u>instructions for an operating system stored in the memory; the instructions for the operating system including instructions for a file system and a database management program, the instructions for the operating system further including instructions for storing the Items in the file system as filestreams, wherein the filestreams are managed within the context of the database management program, the instructions for the operating system further including instructions for managing</u> ~~a hardware/software interface system comprising: a plurality of discrete units of information, Items,wherein said Items are associated by~~ a plurality of Relationships <u>interconnecting the Items</u> ~~managed by said hardware/software interface system~~, the plurality of Relationships including Holding Relationships that control the lifetime of a target Item and Embedding Relationships that enable modeling of compound Items, each Relationship being between a source Item and a target Item; and

    <u>instructions for the operating system including instructions for maintaining</u> a reference count associated with each of the target Items that is used to determine the lifetime of each of the target Items if a Holding Relationship is associated between the source Item and the target Item, and storage of each target Item is maintained based on the lifetime, and a Holding Relationship is prevented from being formed between the source Item and target Item if an Embedding Relationship is currently associated between the source Item and the target Item.

22. (Currently amended)   The computer system of claim 21 wherein each Relationship from among said plurality of Relationships constitutes, at the <u>operating system</u> ~~hardware/software interface system~~ level, a mapping between a pair of Items that said Relationship interconnects.

23. (Previously presented)   The computer system of claim 22 wherein each Relationship has properties.

24. (Previously presented)   The computer system of claim 23 wherein each Relationship comprises a target property for the identification of the target Item of said Relationship.

25. (Previously presented)   The computer system of claim 24 wherein each Relationship further comprises an ownership property corresponding to an ownership of said target Item.

26. (Currently amended)   The computer system of claim 23 wherein the operating system ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common value for a common property.

27. (Currently amended)   The computer system of claim 23 wherein the operating system ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common property.

28. (Currently amended)   The computer system of claim 23 wherein each Item has an Item type, and the operating system ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has the same Item type.

29. (Currently amended)   The computer system of claim 23 wherein each Item has a parent Item type, and the operating system ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common parent Item type.

30. (Currently amended)   The computer system of claim 23 wherein the operating system ~~hardware/software interface system~~ automatically establishes a Relationship between each pair of Items based on a user-defined parameter.